

FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

### 100% SUBMITTAL

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Drawing Title FIRST FLOOR - NEW WORK

Project Title Modernize Boiler Plant B-147 Dayton, Ohio

Project No.

VA Project No. 552-13-305

Heapy Project No. 2012-04027 Building Number 147 Drawing Number

Office of Construction and Facilities Management

Approved: CHIEF ENGINEER

DLE

Drawn

**GENERAL NOTES** 

SCHEDULE 80 STEEL.

**○ PLAN NOTES** 

EXISTING BOILER TO REMAIN.

2 EXISTING PIPING TO REMAIN.

3 EXISTING PUMP TO REMAIN.

4 NATURAL GAS SUPPLY PIPING FROM ABOVE.

5 BOILER FEEDWATER PIPING UP TO SECOND FLOOR.

6 COMBUSTION AIR INTAKE DUCTWORK FROM ABOVE.

WITH DVAMC BOILER CONTROL TECHNICIAN.

9 PROVIDE NEW CONDUCTIVITY PROBE.

11 EXISTING 2" SOFT WATER SUPPLY UP.

13 EXISTING DUPLEX WATER SOFTENER.

14 HIGH PRESSURE STEAM (100) FROM ABOVE.

16 FUEL OIL SUPPLY PIPING FROM ABOVE.

18 PROPANE SUPPLY PIPING FROM ABOVE.

BOILER WATER MANAGEMENT SYSTEM.

MANAGEMENT SYSTEM.

A REFER TO 147-M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B COORDINATE ALL BOILER SHUTDOWNS CLOSELY WITH THE C.O.R. BURNER REPLACEMENTS SHALL BE COMPLETED ONE AT A TIME WITH THE LARGE BURNERS REPLACED BETWEEN MAY 1 AND SEPTEMBER 1.

C ALL NEW PIPING, VALVES, ETC. SHALL BE MADE IN AMERICA. ALL PIPING SHALL BE

7 EXISTING BOILER MASTER AND SUBMASTER CONTROL SYSTEMS TO REMAIN. INTEGRATE NEW FD FAN VOLUME AND ID FAN VOLUME CONTROL FUNCTIONS INTO EXISTING SYSTEM. COORDINATE REQUIREMENTS WITH C.O.R. COORDINATE ALL CONTROL WORK CLOSELY

PROVIDE NEW ELECTRIC, AUTOMATIC BLOWDOWN VALVE AND NEW CONDUCTIVITY PROBES. EXTEND 24V CONTROL WIRING FROM NEW BOILER WATER MANAGEMENT CONTROL PANEL TO EACH CONDUCTIVITY PROBE.

10 PROVIDE NEW AUTOMATED BOILER FEEDWATER MANAGEMENT SYSTEM. SUSPEND FRAME FROM

WALL. REFER TO SPECIFICATION SECTION 23 50 11 FOR ADDITIONAL INFORMATION.

15 CONNECT 0.75" SOFTENED WATER SUPPLY PIPING TO EXISTING SOFTENED WATER MAIN AND EXTEND TO NEW SAMPLE COOLER IN BOILER WATER MANAGEMENT SYSTEM.

17 EXTEND NEW 0.75" SOFTENED WATER PIPING DOWN AND CONNECT TO NEW SAMPLE COOLER IN

19 PROVIDE NEW INVERTER DUTY MOTOR CAPABLE OF VARIABLE SPEED OPERATION. VERIFY NEW MOTOR INSTALLATION WILL ACCOMMODATE EXISTING FIREYE FLAME SAFEGUARD CONTROLS.

20 INTEGRATE CONTROL OF VARIABLE SPEED FORCED DRAFT AND INDUCED DRAFT FANS INTO EXISTING BOILER CONTROLS. UTILIZE A 4-20mA CONTROL SIGNAL. PROVIDE A TACH ON THE MOTORS TO INDICATE ACTUAL MOTOR SPEED. COORDINATE ALL CONTROL WORK CLOSELY WITH THE DVAMC BOILER CONTROL TECHNICIAN. EACH BOILER WILL REQUIRE APPROXIMATELY

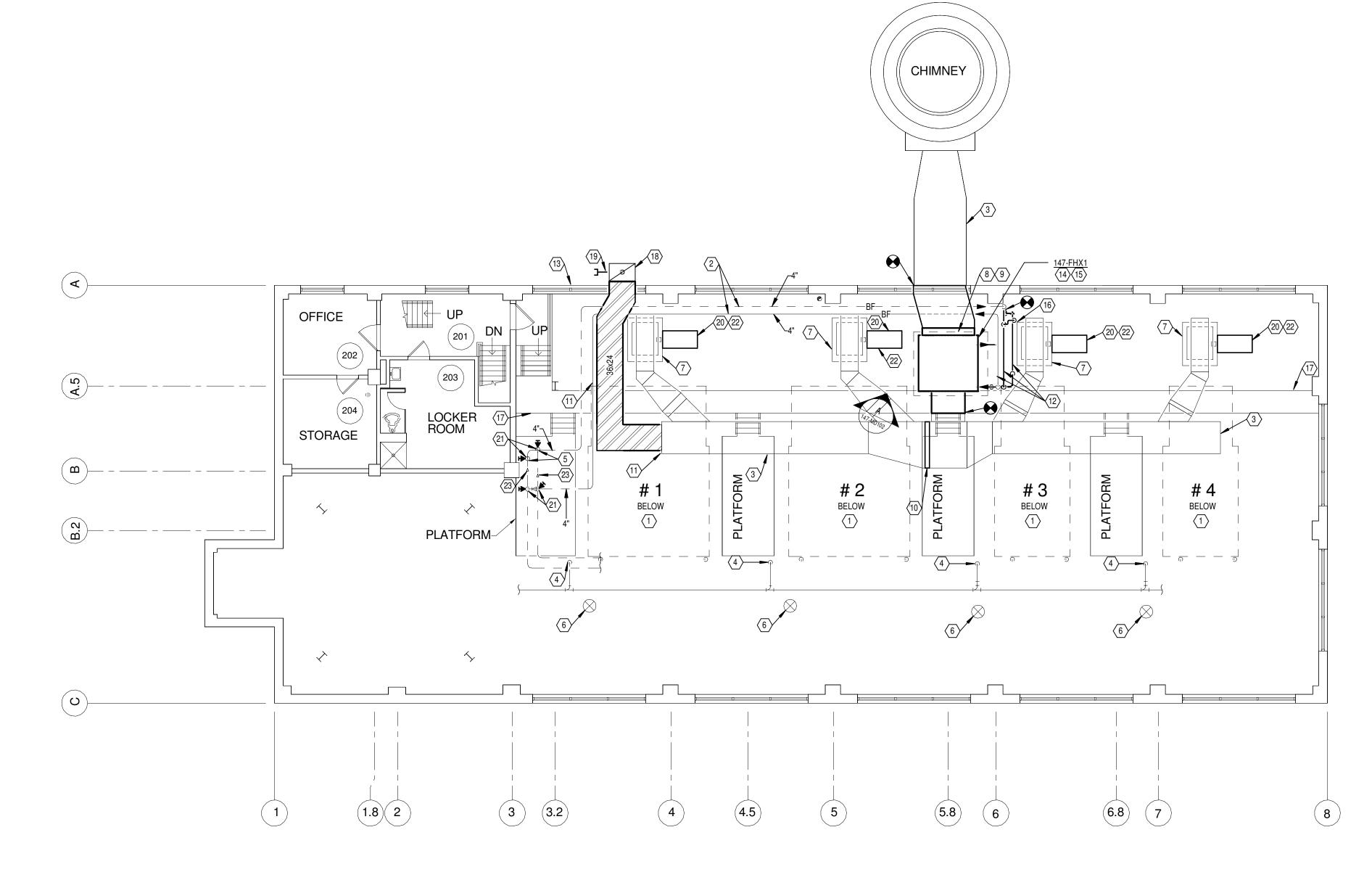
(3) DAYS OF TUNING TIME TO ASSURE PROPER OPERATION OF DRAFT CONTROLS.

12 PROVIDE NEW 0.75" SOFT WATER SUPPLY TO SAMPLE COOLER IN BOILER WATER

Department of Veterans Affairs



CONSULTANTS:



SECOND FLOOR PLAN

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Heapy Engineering Nationally Recognized Leader in Sustainability / LEED

SECOND FLOOR - NEW WORK Approved: CHIEF ENGINEER

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**GENERAL NOTES** 

SCHEDULE 80 STEEL.

○ PLAN NOTES

EXISTING BOILER TO REMAIN.

2 EXISTING PIPING TO REMAIN.

3 EXISTING BREECHING TO REMAIN.

4 NATURAL GAS SUPPLY PIPING TO BURNERS BELOW.

5 BOILER FEEDWATER PIPING FROM BELOW.

7 EXISTING BOILER ID FAN TO REMAIN.

OF THE ECONOMIZER.

15 NEW ECONOMIZER.

BUILDING CONSTRAINTS.

19 VALVED DRAIN CONNECTION.

A REFER TO 147-M001 FOR LEGEND, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.

B COORDINATE ALL BOILER SHUTDOWNS CLOSELY WITH THE C.O.R. TEMPORARY BREECHING REQUIRED TO ALLOW REMOVAL OF EXISTING STACK ECONOMIZER DURING BOILER OPERATION. COORDINATE CHANGEOVER DATE/TIME AND ANTICIPATED DOWN

C ALL NEW PIPING, VALVES, ETC. SHALL BE MADE IN AMERICA. ALL PIPING SHALL BE

6 COMBUSTION AIR INTAKE DUCTWORK FROM ABOVE AND DOWN TO BELOW.

8 EXISTING ROOF HATCH ABOVE. INSIDE DIMENSIONS OF ROOF OPENING ARE

93.5" X 63.75". UTILIZE HATCH FOR REMOVAL OF EXISTING AND INSTALLATION OF NEW STACK ECONOMIZER. EXCEPTED CLEARANCES BETWEEN ECONOMIZER AND OPENING ARE <u>VERY TIGHT.</u> TAKE SPECIAL CARE IN REMOVAL AND INSTALLATION OF EQUIPMENT.

9 REMOVE STRUCTURAL MEMBERS, HANDRAILS, ETC. AS REQUIRED TO REMOVE AND INSTALL EQUIPMENT. COORDINATE ALL REMOVAL OF BUILDING ITEMS WITH C.O.R.

10 PROVIDE TEMPORARY INSULATED BAFFLE, INSIDE OF BREECHING, TO ALLOW FOR

BOILER OPERATION WHILE NEW ECONOMIZER IS BEING INSTALLED. REMOVE WHEN ECONOMIZER IS INSTALLED.

11 REMOVE ACCESS DOOR AND ADD NEW 36"X24" TEMPORARY BREECHING. EXTEND THRU WINDOW AND UP TO 6 FT. ABOVE LOW ROOF. REINSTALL ACCESS DOOR AND REMOVE TEMPORARY BREECHING WHEN NEW ECONOMIZER IS INSTALLED. TEMPORARY BREECHING IS TO BE INSULATED INSIDE THE BUILDING WITH 2" CALCIUM CYCLAMATE.

12 REINSTALL BOILER FEEDWATER AND DRAINS THAT WERE REMOVED FOR INSTALLATION

16 NEW SAFETY RELIEF VALVE TO BE SUPPLIED WITH ECONOMIZER. UTILIZE DISCHARGE

17 METAL GRATE WALKWAY TO ACCESS SECOND FLOOR EQUIPMENT. FIELD VERIFY ALL

20 PROVIDE NEW INVERTER DUTY MOTOR CAPABLE OF VARIABLE SPEED OPERATION.

21 REMOVE EXISITING 4" ECONOMIZER SUPPLY AND RETURN VALVES FOR REPLACEMENT IN

22 INTEGRATE CONTROL OF VARIABLE SPEED FORCED DRAFT AND INDUCED DRAFT FANS INTO EXISTING BOILER CONTROLS. UTILIZE A 4-20mA CONTROL SIGNAL. PROVIDE A TACH

23 REMOVE EXISTING 6" FEEDWATER BYPASS VALVES FOR REPLACEMENT IN NEW WORK.

ON THE MOTORS TO INDICATE ACTUAL MOTOR SPEED. COORDINATE ALL CONTROL
WORK CLOSELY WITH THE DVAMC BOILER CONTROL TECHNICIAN. EACH BOILER WILL
REQUIRE APPROXIMATELY (3) DAYS OF TUNING TIME TO ASSURE PROPER OPERATION OF

13 REINSTALL WINDOW WHEN TEMPORARY BREECHING IS REMOVED. MAINTAIN

WATERTIGHT WHILE TEMPORARY BREECHING IS IN USE.

14 CONNECT NEW ECONOMIZER DAMPER TO EXISTING WIRING.

PIPING REMOVED FOR INSTALLATION OF ECONOMIZER.

18 SUPPORT VERTICAL BREECHING FROM BUILDING.

and Facilities Management

Office of

Construction

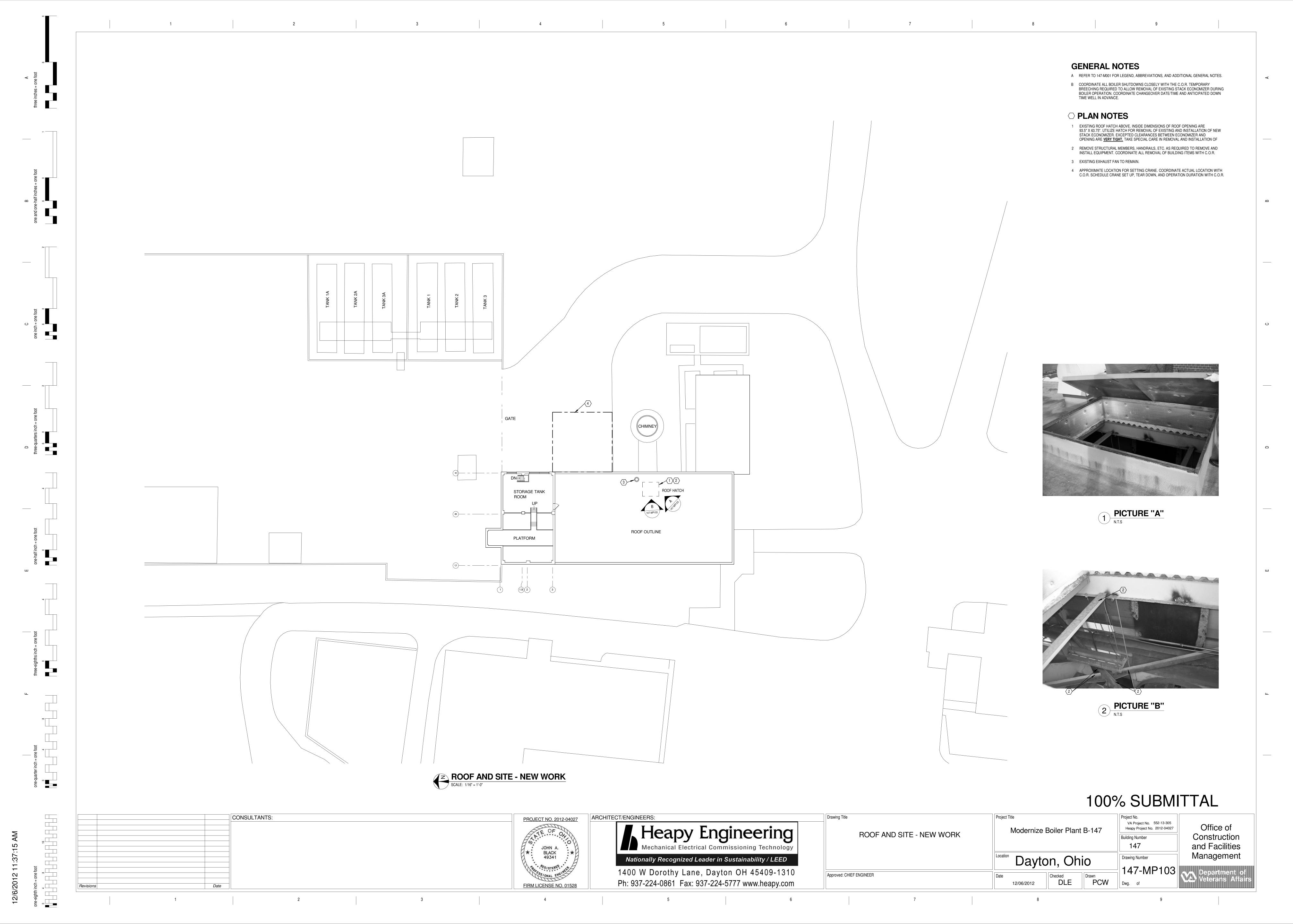
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Drawn PCW DLE

Project Title

147-MP102 Department of Veterans Affairs



<b>TECHNOLOGY</b>	Y SYMBOLS	0	AL SYMBOLS	FIRE ALARM	SYMBOLS	ABBREVIATIONS  AAP - AREA ALARM PANEL - MEDICAL GAS	D - INSIDE DIAMETER
AP	CEILING MOUNTED WIRELESS ACCESS POINT WITH DATA DROP ABOVE CEILING. PROVIDE 20' COIL IN DATA CABLE TO	Φ \$	DASH SYMBOL INDICATES PARTICULAR OUTLET OR DEVICE TO BE REMOVED AND CIRCUITRY MADE CONTINUOUS WHERE REQUIRED.	FACP	FIRE ALARM CONTROL PANEL.	CC - ACCESS - ADJ - ADJUSTABLE	N - INCHES
	FACILITATE RELOCATION OF WAP. WAP PROVIDED BY OWNER.  CONDUIT SLEEVE / FIRE RATED SLEEVE ASSEMBLY THRU WALL (1-2" SLEEVE UNLESS NOTED OTHERWISE).	Φ \$	EXISTING OUTLET OR DEVICE TO REMAIN. MAINTAIN EXISTING CIRCUITING.		FIRE ALARM SPEAKER & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.  FIRE ALARM BELL & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT	AFCI - ARC FAULT CIRCUIT INTERUPTER AFF - ABOVE FINISHED FLOOR TO BOTTOM OF ITEM	KEC - KITCHEN EQUIPMENT CONTRACTOR - LENGTH
<u> </u>	WALL MOUNTED VOICE/DATA OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT(S) TO ABOVE CORRIDOR	•	ELECTRICAL CONNECTION.	F) 15	SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.  FIRE ALARM CHIME & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NO.	AFG - ABÓVE FINISHED GRÁDE TO BÖTTÖM ÖF ITEM I ALT - ALTERNATE AP - ACCESS PANEL I	BS - POUNDS  MAP - MASTER ALARM PANEL (MEDICAL GAS)
<u></u>	CEILING, JACKS, FACEPLATE AND CABLE. REFER TO FACEPLATE DETAILS.  WALL MOUNTED AV OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUITS TO ABOVE ACCESSIBLE CEILING. REFER TO FACEPLATE DETAILS. PROVIDE JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE	Ψ	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).		SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.  FIRE ALARM HORN & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT	APPROX - APPROXIMATE  ARCH - ARCHITECT OR ARCHITECTURAL  ASSY - ASSEMBLY	MAX - MAXIMUM MEZZ - MEZZANINE MFR - MANUFACTURER
	CONFIGURATION.	Ψ	20A-125V SINGLE RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).		SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.  FIRE ALARM SIGNALING LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT	ATS - AUTOMATIC TRANSFER SWITCH	MH - MANHOLE OR MOUNTING HEIGHT TO CENTER LIN MIN - MINIMUM OR MINUTE
$\bigcirc$	TELECOM BOX AND CONDUIT, REFER TO PLANS.  WALL MOUNTED PHONE OUTLET (46" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING,	Ψ	SPECIAL PURPOSE RECEPTACLE. REFER TO NOTE ON PLAN.	ф (c)	SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.  CEILING MOUNTED FIRE ALARM SPEAKER.	BOT - BOTTOM	MISC - MISCELLANEOUS MTD - MOUNTED MTG - MOUNTING
<b>*</b>	JACKS, FACEPLATE AND CABLE. REFER TO FACEPLATE DETAILS.  WALL MOUNTED AV OUTLET (84" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT. REFER TO FACEPLATE	# 	20A-125V DOUBLE DUPLEX RECEPTACLE. NEMA 5-20R, (18" MH UNLESS NOTED OTHERWISE) TWO GANG ASSEMBLY.  20A-125V DUPLEX RECEPTACLE, NEMA 5-20R WITH BOTTOM OUTLET CONTROLLED BY WALL SWITCH. (18" MH UNLESS	EK	FIRE ALARM MANUAL STATION (46" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "K" INDICATES KEY OPERATED.	BTWN - BETWEEN	NIC - NOT IN CONTRACT NOM - NOMINAL
₹ X	DETAILS. PROVIDE JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.  WALL MOUNTED AV OUTLET (44" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT. REFER TO FACEPLATE	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	NOTED OTHERWISE).  20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (46" MH UNLESS NOTED OTHERWISE).	+ -	CEILING MOUNTED SMOKE DETECTOR.	CKT - CIRCUIT CLG - CEILING	NTS - NOT TO SCALE
<u> </u>	DETAILS. PROVIDE JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.  CUSTOM OUTLET IN SURFACE RACEWAY, OUTLET JACKS, FACEPLATE AND CABLING.	M <sup>GF</sup>	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (46 MH UNLESS NOTED OTHERWISE).  20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH UNLESS NOTED	(§)	CEILING MOUNTED HEAT DETECTOR.		DD - OUTSIDE DIAMETER DFCI - OWNER FURNISHED CONTRACTOR INSTALLED DFOI - OWNER FURNISHED OWNER INSTALLED
#) <sub>x</sub>	TECHNOLOGY FLOOR BOX, PROVIDE APPROPRIATE CONNECTOR PLATE AND HINGED COVER. "#" INDICATES OUTLET	Φ <sup>WP</sup>	OTHERWISE).  20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R (HORIZONTAL 18" MH UNLESS NOTED OTHERWISE) WITH	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	DUCT MOUNTED SMOKE DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.		PC - PLUMBING CONTRACTOR (DIVISION 22) PLBG - PLUMBING
Σύχ	TYPE. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION. REFER TO FACEPLATE DETAILS.	⊕ <sup>WP/GF</sup>	WEATHERPROOF COVER, VERTICAL MOUNT.  20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH	→ S/R  → S/R  → S/R	DUCT MOUNTED HEAT DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.	D - DEPTH I	RAD - RADIUS REC - RECESSED
AV SYMBOLS		⊕ <sup>EM</sup>	UNLESS NOTED OTHERWISE), WITH WEATHERPROOF COVER, VERTICAL MOUNT.  20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, ON EMERGENCY POWER (18" MH UNLESS NOTED OTHERWISE).	C S/H	ELECTRIC RELEASE DOOR CLOSER.	DIA - DIAMETER I DIM - DIMENSION I	REQD - REQUIRED RI - ROUGH-IN
15	SINGLE FACED, WALL MOUNTED CLOCK (102" MH UNLESS NOTED OTHERWISE). 12" DIAMETER FACE UNLESS	$\Phi^{T}$	20A-125V POWERLOCK GROUNDING TYPE RECEPTACLE, HOSPITAL USE (66" MH UNLESS NOTED OTHERWISE).	D	ELECTRO-MAGNETIC DOOR HOLDER.	DIV - DIVISION DN - DOWN DWG - DRAWING	S - SURFACE MOUNTED SC - SECURITY CONTRACTOR
<u>w</u> ⊕	SUBSCRIPT "15" FOR 15" DIAMETER FACE. SUBSCRIPT "W" INDICATES WIREGUARD.  DOUBLE FACED, WALL MOUNTED CLOCK (102" MH UNLESS NOTED OTHERWISE). 12" DIAMETER FACE UNLESS		20A-125V DUPLEX PEDESTAL TYPE FLOOR RECEPTACLE. PROVIDE CARPET FLANGE WHERE REQUIRED.	FS	WATER FLOW SWITCH.	EA - EACH EC - ELECTRICAL CONTRACTOR (DIVISION 26)	SCH - SCHEDULE SHT - SHEET SMS - SECURITY MANAGEMENT SYSTEM
42	SUBSCRIPT "15" FOR 15" DIAMETER FACE.  FLAT PANEL DISPLAY WITH WALL MOUNTING HARDWARE (84" MH UNLESS NOTED OTHERWISE). # INDICATES NOMINAL		20A-125V DUPLEX RECEPTACLE IN FLOOR BOX. PROVIDE CARPET FLANGE WHERE REQUIRED.	V	VALVE SUPERVISORY SWITCH.	EJ - EXPANSION JOINT (SELECT - ELECTRICAL)	SPEC - SPECIFICATIONS SQ - SQUARE
	SCREEN DIAGONAL SIZE.  CEILING MOUNTED MANUAL PROJECTION SCREEN.	₽ <sup>IG</sup>	20-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH ISOLATED GROUND (18" MH UNLESS NOTED OTHERWISE).	W	DUCT MOUNTED DETECTOR REMOTE TEST STATION AND ALARM INDICATOR LIGHT. SUBSCRIPT "W" INDICATES WALL MOUNTED.	ELEV - ELEVATION OR ELEVATOR  EM - EMERGENCY  EQ - EQUAL	SS - STAINLESS STEEL STD - STANDARD STRUC - STRUCTURAL OR STRUCTURE
 	WALL MOUNTED MANUAL PROJECTION SCREEN.	Ф <sup>20А</sup>	20A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-20R (18" MH UNLESS NOTED OTHERWISE).	SD	SMOKE DAMPER.	EQS - EQUIPMENT SUPPLIER EQUIP - EQUIPMENT ETR - EXISTING TO REMAIN	SUC - SITE UTILITY CONTRACTOR  TC - TECHNOLOGY CONTRACTOR
PR <sub>X</sub>	CEILING MOUNTED PROJECTOR. SUBSCRIPT "X" INDICATES CONFIGURATION TYPE, REFER TO FACEPLATE DETAILS.	Ф <sup>30А</sup>	30A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-30R (18" MH UNLESS NOTED OTHERWISE).	FT	FIRE FIGHTER'S TELEPHONE (60" MH UNLESS NOTED OTHERWISE).	EX - EXISTING EXP - EXPANSION	FEMP - TEMPERATURE FOF - TOP OF FQUIPMENT
<u> </u>	CEILING MOUNTED PAGING/INTERCOM SYSTEM SPEAKER.	$\Phi^{50A}$	50A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-50R (18" MH UNLESS NOTED OTHERWISE).	PS	PRESSURE SWITCH.	EX/R - EXISTING TO BE RELOCATED	JNO - UNLESS NOTED OTHERWISE
 ©⊲	HORN TYPE PAGING/INTERCOM SYSTEM SPEAKER (90" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75"		20A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-20R (18" MH UNLESS NOTED OTHERWISE).	AM <sub>C/I</sub>	ADDRESSABLE MODULE. SUBSCRIPT "I" INDICATES INPUT. SUBSCRIPT "C" INDICATES CONTROL.	FCE - FIRE CONTROL EQUIPMENT FF - FINISHED FLOOR ELEVATION	/FD - VARIABLE FREQUENCY DRIVE /OL - VOLUME
	CONDUIT TO ABOVE ACCESSIBLE CEILING, GROMMÈTED FACEPLATE, SPEAKER, INSTALLATION AND WIRING.  SURFACE MOUNTED PAGING/INTERCOM SPEAKER (90" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "H" INDICATES	♥ <sup>30A</sup>	30A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-30R (18" MH UNLESS NOTED OTHERWISE).	PIV	POST INDICATOR VALVE.	FSC - FIRE SUPPRESSION CONTRACTOR (DIVISION 21)  FT - FEET  FIG. FOOTING	N/ - WITH
S	HANGING CEILING SPEAKER. 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLÉ CEILING, SPEAKER, INSTALLATION AND CABLING.	$ \overline{\varphi}^{50A} $	50A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-50R (18" MH UNLESS NOTED OTHERWISE).	K	KNOX BOX.	FTG - FOOTING EX/R - EXISTING TO BE RELOCATED GC - GENERAL CONTRACTOR	N/O - WITHOUT NP - WEATHERPROOF
V	PAGING/INTERCOM SYSTEM WALL MOUNTED SPEAKER VOLUME CONTROLLER (46" MH UNLESS NOTED OTHERWISE).  1-GANG BOX AND 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, VOLUME CONTROLLER WITH FACEPLATE, INSTALLATION AND WIRING.	<u> </u>	JUNCTION BOX.	LUMINAIRE S	SYMBOLS	GF - GROUND FAULT CIRCUIT INTERRUPTER GFCI - GROUND FAULT CIRCUIT INTERRUPTER OR GOVERNMENT FURNISHED CONTRACTOR INSTALLED	ZVC - ZONE VALVE CABINET
	INSTALLATION AND WINING.		MULTI-OUTLET RECEPTACLES ASSEMBLY, NEMA 5-15R (SINGLE OUTLETS ON 18" CENTERS) (46" MH UNLESS NOTED OTHERWISE).			GFFT - GROUND FAULT FEED THRU  HC - HVAC CONTRACTOR (DIVISION 23)	
SECURITY SY	MBOLS	H©	CLOCK HANGER OUTLET, SINGLE NEMA 5-15R RECESSED IN COVER PLATE (84" MH UNLESS NOTED OTHERWISE).	$\begin{array}{c c} Q \bigcirc & A \\ \hline \end{array}$	LIGHTING FIXTURE. CAPITAL LETTER DENOTES FIXTURE TYPE, LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.	HP - HORSE POWER OR HIGH POINT HVAC - HEATING, VENTILATING, AND AIR CONDITIONING	
CC X	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA	\$	SINGLE POLE SWITCH (46" MH UNLESS NOTED OTHERWISE).	$\begin{array}{c c} & & & \\ \hline & \rightarrow & \rightarrow \\ \hline \end{array}$	LIGHTING FIXTURE ON NIGHT LIGHT OR EMERGENCY CIRCUIT.	GENERAL FLOOR PLAN NOTES	
Œ.	SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE.  PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY  IN PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INTO EL	2 \$	TWO POLE WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).	<u> </u>	EXIT LIGHTING FIXTURE, ARROWS AS INDICATED.		
GB GB	HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR.  GLASS BREAK.	\$	THREE-WAY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).	NURSE CALL	SYMBOLS	B DETAIL: B = DETAIL DESIGNATION E2 = SHEET WHERE DETAIL IS	LOCATED
	DESK MOUNTED INTERCOM MASTER STATION.	\$	FOUR-WAY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).			1	
MD	CEILING MOUNTED MOTION DETECTOR.	\$	SWITCH WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS NOTED OTHERWISE).	NCCP	NURSE CALL CONTROL PANEL.  NURSE CALL DESK MOUNTED MASTER CONTROL STATION (OUTLET AT 18" MH UNLESS NOTED OTHERWISE).	SECTION: 1 = SECTION DESIGNATION E2 = SHEET WHERE DETAIL I	S LOCATED
PB	DESK MOUNTED PUSH BUTTON FOR LOCAL ELECTRONIC DOOR RELEASE.	\$	KEY OPERATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).	NM]	SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).	PLAN NOTE. APPLIES ONLY TO THE SHI	EET WHICH IT IS SHOWN.
PP	DESK MOUNTED PANIC/DURESS BUTTON.	Š DM	LOW-VOLTAGE MOMENTARY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).	NS	NURSE CALL STAFF STATION (46" MH UNLESS NOTED OTHERWISE).	3 DETAIL NOTE. APPLIES ONLY TO THE A	SSOCIATED DETAIL.
⊢©C X	CCTV SYSTEM WALL MOUNTED CAMERA (REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS). SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE	\$ B	LIGHTING DIMMER SWITCH (46" MH UNLESS NOTED OTHERWISE) 1000 WATTS UNLESS OTHERWISE INDICATED.  SWITCH WITH RECEPTACLE (46" MH UNLESS NOTED OTHERWISE) STANDARD TWO-GANG ASSEMBLY OF SWITCH AND	ND N	NURSE CALL DUTY STATION (46" MH UNLESS NOTED OTHERWISE).  NURSE CALL STATION WITH PULL CORD FOR PATIENT USE (33" MH IN TOILET ROOMS, 90" M.H. IN SHOWERS AND WET	CABLE TRAY, 12" x 4" DEEP UNLESS NO	TED OTHERWISE.
	ACCESSIBLE CEILING, CAMERA AND CABLING.  WALL MOUNTED PROXIMITY CARD READER (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH CONDUIT TO	\$ M	RECEPTACLE.  FLUSH FRACTIONAL HORSEPOWER MOTOR STARTER WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS	NC NC	AREAS, 46" MH UNLESS NOTED OTHERWISE IN ALL OTHER AREAS).  PATIENT NURSE CALL UTILITY CONSOLE (46" MH UNLESS NOTED OTHERWISE).	WIRE & CONDUIT IN WALL OR ABOVE CE	ILING.
CR	COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, CARD READER AND CABLING. REFER TO SECURITY ROUGH-IN DETAILS.  ELEVATOR CAB MOUNTED CARD READER. READER TO BE INSTALLED IN ELEVATOR CAB AS COORDINATED WITH	<b>\$</b> н	NOTED OTHERWISE).  HP RATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).		PATIENT NURSE CALL STATION (ONE OR TWO CORDS AS INDICATED, 46" MH UNLESS NOTED OTHERWISE).	WIRE & CONDUIT IN OR BELOW SLAB OF	R GRADE.
CREL	ELEVATOR CONTRACTOR. WIRING FROM CAB THRU TRAVELING CABLE TO ELEVATOR CONTROLLER IN ELEVATOR MACHINE ROOM AND INTERFACE WITH ELEVATOR CONTROLLER AND SMS, COORDINATE WITH ELEVATOR	\$	ELECTRICAL PANEL OR SWITCHBOARD PER DRAWINGS.		CEILING MOUNTED NURSE CALL DOME LIGHT.	CONDUIT TO BE REMOVED.	
	CONTRACTOR. REFER TO SECURITY ROUGH-IN DETAILS.  LOCAL IP BASED 2-DOOR ACCESS CONTROL PANEL SERVING LOCAL CARD READER/SECURITY CONTROLLED DOORS.	P/B	PULL BOX.	- HQ	WALL MOUNTED NURSE CALL DOME LIGHT (90" MH UNLESS NOTED OTHERWISE).	E EXISTING WIRE & CONDUIT TO REMAIN.	
DC	LOCATE ABOVE ADJACENT ACCESSIBLE CEILING. PROVIDE DATA DROP IN 0.75" CONDUIT TO LOCAL DATA CLOSET. EXTEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL SECURITY SYSTEM JUNCTION BOX. REFER TO SECURITY ROUGH-IN DETAILS FOR WORK.		DISCONNECT SWITCH.		CEILING MOUNTED COMBINATION DOME LIGHT AND BUZZER.	DAT CONDUIT FOR DATA CIRCUITRY.	
DM	DOOR POSITION SWITCH WITH WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. PROVIDE ONE CONTACT FOR EACH LEAF IN MULTI-DOOR OPENINGS. REFER TO SECURITY ROUGH-IN DETAILS.		MOTOR STARTER.	$ \mathbb{Z}^{Z}$	CEILING MOUNTED NURSE CALL ZONE LIGHT.	WIRE & CONDUIT FOR EMERGENCY CIRC	
EL	ELECTRONIC DOOR LOCK AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.		COMBINATION MOTOR STARTER AND DISCONNECT SWITCH.	E N	NURSE CALL EMERGENCY BUTTON (46" MH UNLESS NOTED OTHERWISE).	FA WIRE & CONDUIT FOR FIRE ALARM CIRC	
	ELECTRONIC MAG LOCK AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR	<i>∧</i>	ELECTRIC MOTOR.	B N	EMERGENCY CODE BLUE BUTTON (46" MH UNLESS NOTED OTHERWISE).	WIRE & CONDUIT FOR INTERCOM SYSTE	
EM	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.	✓ UH	UNIT HEATER.			WIRE & CONDUIT FOR NURSE CALL CIRC	
ES	ELECTRONIC STRIKE AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.	✓ FC	FAN COIL.			WIRE & CONDUIT FOR NIGHT LIGHT CIRC	JOHHH.
HA	WALL/PEDESTAL MOUNT HANDICAP DOOR ACTUATOR BUTTON, FURNISHED BY OTHERS. BOX AS REQUIRED BY SYSTEM MANUFACTURER WITH INSTALLATION AND CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. ALL	∕O∕ <sub>AC</sub>	AIR CONDITIONER.			WIRE & CONDUIT FOR PHONE CIRCUITRY.	CIRCUITRY.
	LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR MOTOR. REFER TO SECURITY ROUGH-IN DETAILS.  HANDICAP DOOR OPERATOR MOTOR ASSEMBLY BY OTHERS. 120V POWER CONNECTION AND CONDUIT FROM DOOR	∕o′ <sub>CU</sub>	CONDENSING UNIT.			SEC WIRE & CONDUIT FOR SOUND SYSTEM O	
HD	HANDICAP DOOR OPERATOR MOTOR ASSEMBLY BY OTHERS. 120V POWER CONNECTION AND CONDUIT FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR ACTUATOR BUTTONS. REFER TO SECURITY ROUGH-IN DETAILS.	✓ <sub>UV</sub>	UNIT VENTILATOR.			WIRE & CONDUIT FOR SECURITY SYSTE	
(IC)	WALL MOUNTED INTERCOM DOOR STATION (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, INTERCOM AND CABLING.	(CR)	CORD REEL.			WIRE RUN IN SURFACE WIREWAY.	
JB	SECURITY SYSTEM JUNCTION BOX TO BE LOCATED ABOVE ACCESSIBLE CEILING (MIN 6"X6"X4"). ROUTE LOCAL DOOR SECURITY WIRING CONDUITS/RACEWAYS TO JUNCTION BOX. EXTEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL 2-DOOR CONTROL PANEL AS INDICATED ON DRAWINGS. REFER TO SECURITY	PP	POWER POLE.			——————————————————————————————————————	Υ.
	LOCAL 2-DOOR CONTROL PANEL/REMOTE DOOR CONTROL PANEL AS INDICATED ON DRAWINGS. REFER TO SECURITY ROUGH-IN DETAILS FOR WORK.  WALL MOUNTED SECURITY KEYPAD ENTRY STATION (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75"	Ţ	LINE VOLTAGE THERMOSTAT.				COMPLETE CIRCUIT; "X" DENOTES PANEL NAME; NUMBER
K	CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, KEYPAD AND CABLING.  WALL MOUNTED COMBINATION KEYPAD/CARDREADER (46" MH UNLESS NOTED OTHERWISE). 2-GANG BOX WITH 0.75"	H <sub>DH</sub>	DUCT HEATER.			UHUUII(S).	
KC KC	CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, DEVICE AND CABLING.  CEILING MOUNTED MOTION DETECTOR. 1-GANG BOX MOUNTED IN CEILING, DETECTOR AND CABLING.	H <sub>EB</sub>	ELECTRIC BASEBOARD HEATER.				
MD	WALL MOUNTED MOTION DETECTOR (90" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE	M	INTERCOM SYSTEM DESK MOUNTED MASTER CONTROL STATION. SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).			EI ECTRICAI	LI DRAWING INDEX
PB W	ACCESSIBLE CEILING, MOTION DETECTOR, WALL MOUNT HARDWARE, AND CABLING.  WALL MOUNTED PUSH BUTTON FOR LOCAL ELECTRONIC DOOR RELEASE (46" MH UNLESS NOTED OTHERWISE). 1-GANG		INTERCOM STAFF STATION (46" MH UNLESS NOTED OTHERWISE).			SHEET 147-E001 SYMBOLS AND	DESCRIPTION INDEX
 → PB M	BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, BUTTON AND CABLING.  WALL MOUNTED PANIC/DURESS BUTTON (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO	H	INTERCOM HORN TYPE SPEAKER (84" MH UNLESS NOTED OTHERWISE).			147-E501 SCHEDULES A 147-EP101 FIRST FLOOR	ND DETAILS - NEW WORK
~W	ABOVE ACCESSIBLE CEILING, BUTTON AND CABLING.  LOCAL LOW VOLTAGE POWER SUPPLY FOR EXTERIOR CAMERA. SUBSCRIPT "X" INDICATES ASSOCIATED CAMERA. 120V	S	INTERCOM SPEAKER FLUSH MOUNT IN CEILING.			147-EP102 SECOND FLOO	OK - POWER
	POWER INTO LOCAL JUNCTION BOX ABOVE CEILING AND CONNECTION TO POWER SUPPLY, POWER SUPPLY MOUNTED ABOVE CEILING AND LOW VOLTAGE WIRING TO LOCAL CAMERA.		PUSHBUTTON (46" MH UNLESS NOTED OTHERWISE).	NOTE: A	LL SYMBOLS AND ABBREVIATIONS ARE SUBJECT		
PSX	T BEUTEGET TO EALL GIVILLOR IN DOUGH PROMINE ON VEHICLE TOWN NOT ENDER MILITIAL MORNING ADVISOR ASSESSMENT ASS		BUZZER (90" MH UNLESS NOTED OTHERWISE).		MODIFICATIONS ON OTHER DRAWINGS.		
	REQUEST TO EXIT SWITCH IN DOOR HARDWARE BY OTHERS. LOW VOLTAGE WIRING, CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.	I	4" DIAMETER BELL (90" MH UNLESS NOTED OTHERWISE).				
PSX	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	<b>B</b>		· <del>-</del>			
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1"	$\bigcirc$	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).		MBOLS OR ABBREVIATIONS MIGHT NOT		
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	PC	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).  PHOTOELECTRIC SENSOR.		SARILY BE USED ON THIS PROJECT.		
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	PC LC	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).  PHOTOELECTRIC SENSOR.  LIGHTING CONTACTOR.				
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	PC LC OS	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).  PHOTOELECTRIC SENSOR.  LIGHTING CONTACTOR.  CEILING MOUNTED OCCUPANCY SENSOR.				
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	PC LC OS HOS	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).  PHOTOELECTRIC SENSOR.  LIGHTING CONTACTOR.				0/ OIIDA 41 <del></del> 4
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	PC LC OS	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).  PHOTOELECTRIC SENSOR.  LIGHTING CONTACTOR.  CEILING MOUNTED OCCUPANCY SENSOR.  WALL MOUNTED OCCUPANCY SENSOR.			100	% SUBMITTA
PS X	FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.  WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY	PC LC OS HOS OS	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).  PHOTOELECTRIC SENSOR.  LIGHTING CONTACTOR.  CEILING MOUNTED OCCUPANCY SENSOR.  WALL MOUNTED OCCUPANCY SENSOR.  CEILING MOUNTED DAYLIGHT SENSOR.			Project Title	% SUBMITTA  Project No. VA Project No. 552-13-305

ARM	SYMBOLS	ABE	BREVIATIONS		
]	FIRE ALARM CONTROL PANEL.	AA P CC	- AREA ALARM PANEL - MEDICAL GAS - ACCESS	ID IN	- INSIDE DIAMETER - INCHES
 ; <b>1</b>	FIRE ALARM SPEAKER & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.	ADJ AF AFCI	- ADJUSTABLE - ARC FAULT CIRCUIT INTERUPTER - ARC FAULT CIRCUIT INTERUPTER	KEC	- KITCHEN EQUIPMENT CONTRACTOR
; ;	FIRE ALARM BELL & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.	AFF AFG	- ABOVE FINISHED FLOOR TO BOTTOM OF ITEM - ABOVE FINISHED GRADE TO BOTTOM OF ITEM	L LBS	- LENGTH - POUNDS
<u>`</u>	FIRE ALARM CHIME & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.	ALT AP APPRO)	- ALTERNATE - ACCESS PANEL ( - APPROXIMATE	MAP MAX	- MASTER ALARM PANEL (MEDICAL GAS) - MAXIMUM
<u>`                                    </u>	FIRE ALARM HORN & SIGNAL LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.	ARCH ASSY ATS	- ARCHITECT OR ARCHITECTURAL - ASSEMBLY - AUTOMATIC TRANSFER SWITCH	MEZZ MFR MH	- MEZZANINE - MANUFACTURER - MANHOLE OR MOUNTING HEIGHT TO CENTER LINE OF ITI
	FIRE ALARM SIGNALING LIGHT (80" AFF), (# WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.	BLDG	- BUILDING	MIN MISC	- MINIMUM OR MINUTE - MISCELLANEOUS
:	CEILING MOUNTED FIRE ALARM SPEAKER.	BOE BOT BTWN	- BOTTOM OF EQUIPMENT - BOTTOM - BETWEEN	MTD MTG	- MOUNTED - MOUNTING
	FIRE ALARM MANUAL STATION (46" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "K" INDICATES KEY OPERATED.	CFCI CKT	- CONTRACTOR FURNISHED CONTRACTOR INSTALLED - CIRCUIT	NIC NOM NTS	- NOT IN CONTRACT - NOMINAL - NOT TO SCALE
	CEILING MOUNTED SMOKE DETECTOR.	CLG CMU	- CEILING - CONCRETE MASONRY UNIT	OD	- OUTSIDE DIAMETER
	CEILING MOUNTED HEAT DETECTOR.		- CONNECT OR CONNECTION - CONTRACTOR - CORRIDOR	OFCI OFOI	- OWNER FURNISHED CONTRACTOR INSTALLED - OWNER FURNISHED OWNER INSTALLED
== / R	DUCT MOUNTED SMOKE DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.	CTR COR	- CENTER - CONTRACTING OFFICER'S REPRESENTATIVE	PC PLBG	- PLUMBING CONTRACTOR (DIVISION 22) - PLUMBING
= 'R	DUCT MOUNTED HEAT DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.	D DET	- DEPTH - DETAIL	RAD REC	- RADIUS - RECESSED
	ELECTRIC RELEASE DOOR CLOSER.	DIA DIM DIV	- DIAMETER - DIMENSION - DIVISION	REQD RI	- REQUIRED - ROUGH-IN
	ELECTRO-MAGNETIC DOOR HOLDER.	DN DW G	- DOWN - DRAWING	S SC	- SURFACE MOUNTED - SECURITY CONTRACTOR
	WATER FLOW SWITCH.	EA EC	- EACH - ELECTRICAL CONTRACTOR (DIVISION 26)	SCH SHT SMS	- SCHEDULE - SHEET - SECURITY MANAGEMENT SYSTEM
	VALVE SUPERVISORY SWITCH.	EJ ELEC	- EXPANSION JOINT - ELECTRICAL	SPEC SQ	- SPECIFICATIONS - SQUARE
	DUCT MOUNTED DETECTOR REMOTE TEST STATION AND ALARM INDICATOR LIGHT. SUBSCRIPT "W" INDICATES WALL MOUNTED.	ELEV EM EQ	- ELEVATION OR ELEVATOR - EMERGENCY - EQUAL	SS STD STRUC	- STAINLESS STEEL - STANDARD - STRUCTURAL OR STRUCTURE
	SMOKE DAMPER.	EQS EQUIP ETR	- EQUIPMENT SUPPLIER - EQUIPMENT - EXISTING TO REMAIN	SUC TC	- SITE UTILITY CONTRACTOR - TECHNOLOGY CONTRACTOR
	FIRE FIGHTER'S TELEPHONE (60" MH UNLESS NOTED OTHERWISE).	EX EXP	- EXISTING - EXPANSION	TEMP TOE	- TEMPERATURE - TOP OF EQUIPMENT
	PRESSURE SWITCH.	EXT EX/R	- EXTERIOR - EXISTING TO BE RELOCATED	TYP UNO	- TYPICAL - UNLESS NOTED OTHERWISE
′I	ADDRESSABLE MODULE. SUBSCRIPT "I" INDICATES INPUT. SUBSCRIPT "C" INDICATES CONTROL.	FCE FF	- FIRE CONTROL EQUIPMENT - FINISHED FLOOR ELEVATION	VFD	- VARIABLE FREQUENCY DRIVE
•	POST INDICATOR VALVE.	FLR FSC FT	- FLOOR - FIRE SUPPRESSION CONTRACTOR (DIVISION 21) - FEET	V OL W/	- VOLUME - WITH
	KNOX BOX.	FTG EX/R GC	- FOOTING - EXISTING TO BE RELOCATED - GENERAL CONTRACTOR	W/0 WP	- WITHOUT - WEATHERPROOF
RE S	SYMBOLS	GF GFCI GFFT	- GROUND FAULT CIRCUIT INTERRUPTER - GROUND FAULT CIRCUIT INTERRUPTER OR GOVERNM FURNISHED CONTRACTOR INSTALLED - GROUND FAULT FEED THRU	ZVC ENT	- ZONE VALVE CABINET
1	LIGHTING FIXTURE. CAPITAL LETTER DENOTES FIXTURE TYPE, LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.	HC HP HVAC	- HVAC CONTRACTOR (DIVISION 23) - HORSE POWER OR HIGH POINT - HEATING, VENTILATING, AND AIR CONDITIONING		
	LIGHTING FIXTURE ON NIGHT LIGHT OR EMERGENCY CIRCUIT.		NERAL FLOOR PLAN NOT	rec	
$\rightarrow$	EVIT LICHTING FLYTHDE ADDOME AC INDICATED	GEI	ALDAL FLOOR PLAIN NO	LJ	

B E2	DETAIL: B = DETAIL DESIGNATION E2 = SHEET WHERE DETAIL IS LOCATED
1 E2	SECTION: 1 = SECTION DESIGNATION E2 = SHEET WHERE DETAIL IS LOCATED
3	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN.
3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
	CABLE TRAY, 12" x 4" DEEP UNLESS NOTED OTHERWISE.
	WIRE & CONDUIT IN WALL OR ABOVE CEILING.
======	WIRE & CONDUIT IN OR BELOW SLAB OR GRADE.
C========	CONDUIT TO BE REMOVED.
E	EXISTING WIRE & CONDUIT TO REMAIN.
DAT	CONDUIT FOR DATA CIRCUITRY.
EM	WIRE & CONDUIT FOR EMERGENCY CIRCUITRY.
FA	WIRE & CONDUIT FOR FIRE ALARM CIRCUITRY.
	WIRE & CONDUIT FOR INTERCOM SYSTEM CIRCUITRY.
NC NC	WIRE & CONDUIT FOR NURSE CALL CIRCUITRY.
NL NL	WIRE & CONDUIT FOR NIGHT LIGHT CIRCUITRY.
PHO	CONDUIT FOR PHONE CIRCUITRY.
\$:	WIRE & CONDUIT FOR SOUND SYSTEM CIRCUITRY.
SEC SEC	WIRE & CONDUIT FOR SECURITY SYSTEM CIRCUITRY.
TV=	WIRE & CONDUIT FOR TELEVISION SYSTEM CIRCUITRY.
W	WIRE RUN IN SURFACE WIREWAY.
СМ	CABLE MANAGEMENT SYSTEM PATHWAY.
X - 1,2	EACH ARROWHEAD REPRESENTS ONE COMPLETE CIRCUIT; "X" DENOTES PANEL NAME; NUMBER(S) DENOTES CIRCUIT(S).

	ELECTRICALI DRAWING INDEX
SHEET	DESCRIPTION
147-E001	SYMBOLS AND INDEX
147-E501	SCHEDULES AND DETAILS
147-EP101	FIRST FLOOR - NEW WORK
147-EP102	SECOND FLOOR - POWER

# 100% SUBMITTAL

JOHN A. BLACK 49341

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Modernize Boiler Plant B-147 SYMBOLS AND INDEX Dayton, Ohio

Project No.

VA Project No. 552-13-305

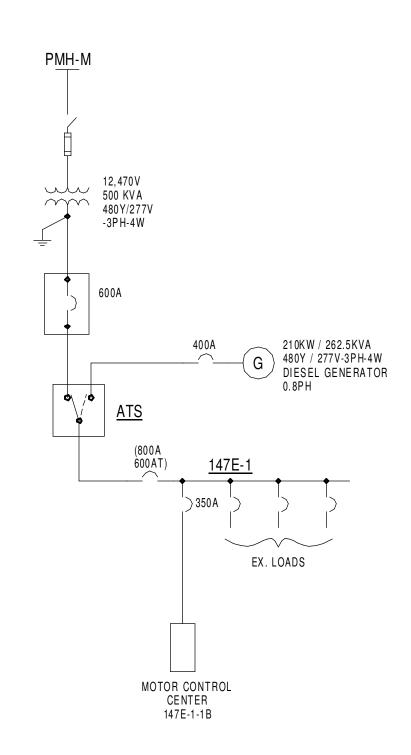
Heapy Project No. 2012-04027 Office of Construction Building Number and Facilities 147 Management Drawing Number SA Department of VA Velerans Affairs

147-E001 Drawn Checked MSG Dwg. of

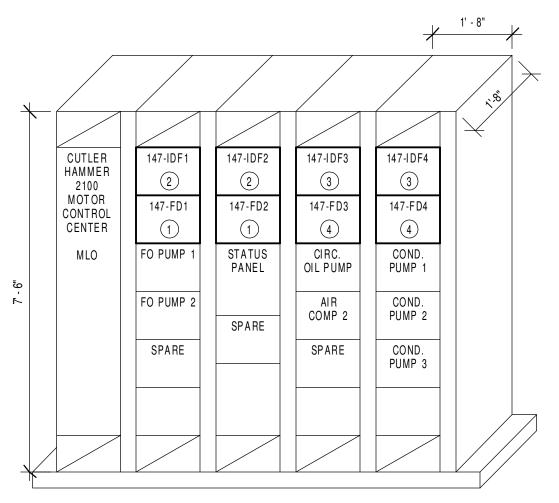
Revisions

Date

										H_E_MOT	ORS, ST	ARTE	RS, DI	ISCON			ITROLS SCH	EDULE	<u> </u>													
				MOTO					STARTER					DISCONNECT MEANS							CONTROL			FEEDER								
			C	HARAC	CTERI	STICS				LOCATION			TYPE	<u> </u>		L	OCATION				TYPE			LOC	ATION		Y E.C.					
MARK	NAMEPLATE	HORSEPOWER (HP)	LOAD (kVA)	120V-1PH	208V-3PH	<del>  -</del>	277v-1PH 480v-1PH	480V-3PH	ROOM NUMBER	ROOM NAME	NEMA SIZE	ミーラー	I⊢⊢I⊔	2-SPEED VFD	NOTE	MOTOR 3 CONT	EQUIP CONT PANEL ROOM NUMBER	SEE NOTE	FURNISHED BY	DISC SWITCH MANUAL STABTER	RECEPTACLE FEEDER SW OR BREAKER	NEWA I TPE DISC SIZE	FUSE SIZE NEAR MOTOR	CONT	EQUIP CONT PANEL PANELBOARD	SEE NOTE FURNISHED BY	INTERLOCK WITH MOTOR NO. BY MANUAL AT STARTER INTEGRAL WITH FOLLIPMENT	AISHED BY	SEE NOTE		<u>ଅ</u>   ୯	CONDUIT SIZE
47-FD1	BOILER 1 FORCED DRAFT FAN	40	43.2					•						•		•		1	DIV 26		•			•		DIV 26		DIV 23		3 2		1.25
7-FD2	BOILER 2 FORCED DRAFT FAN	40	43.2					•						•		•			DIV 26		•			•		DIV 26		DIV 23	3	3 2	8 1	1.25
7-FD3	BOILER 3 FORCED DRAFT FAN	20	22.4					•						•		•			DIV 26		•			•		DIV 26		DIV 23	3	3 6	10 0	).75
7-FD4	BOILER 4 FORCED DRAFT FAN	20	22.4					•						•		•			DIV 26		•			•		DIV 26		DIV 23	3	3 6	10 0	ı.75
7-IDF1	INDUCED DRAFT FAN 1	25	28.3					•						•			1ST FLR	[	DIV 26	•			•			DIV 26		DIV 23	3	3 6	10 0	ı.75
7-IDF2	INDUCED DRAFT FAN 2	25	28.3					•						•			1ST FLR		DIV 26	•			•			DIV 26		DIV 23	3	3 6	10 0	ı.75
7-IDF3	INDUCED DRAFT FAN 3	15	17.5					•						•			1ST FLR		DIV 26	•			•			DIV 26		DIV 23	3	8	10 0	ı.75
7-IDF4	INDUCED DRAFT FAN 4	15	17.5					•						•			1ST FLR	Г	DIV 26	•			•			DIV 26		DIV 23	3	8 8	10 0	J.75



PARTIAL SINGLE LINE DIAGRAM
SCALE: NTS



O DETAIL NOTES

1. REMOVE 480V NEMA 2 STARTER BUCKET AND PROVIDE NEW 480V-90A/3P FEEDER

2. REMOVE 480V NEMA 1 STARTER BUCKET AND PROVIDE NEW 480V-60A/3P FEEDER BUCKET (60A CIRCUIT BREAKER) IN CUTLER HAMMER 2100 SERIES MOTOR CONTROL

3. REMOVE 480V NEMA 1 STARTER BUCKET AND PROVIDE NEW 480V-40A/3P FEEDER BUCKET (40A CIRCUIT BREAKER) IN CUTLER HAMMER 2100 SERIES MOTOR CONTROL

4. REMOVE 480V NEMA 1 STARTER BUCKET AND PROVIDE NEW 480V-50A/3P FEEDER BUCKET (50A CIRCUIT BREAKER) IN CUTLER HAMMER 2100 SERIES MOTOR CONTROL CENTER.

BUCKET (90A CIRCUIT BREAKER) IN CUTLER HAMMER 2100 SERIES MOTOR CONTROL

EX. MCC 147E-1-1B

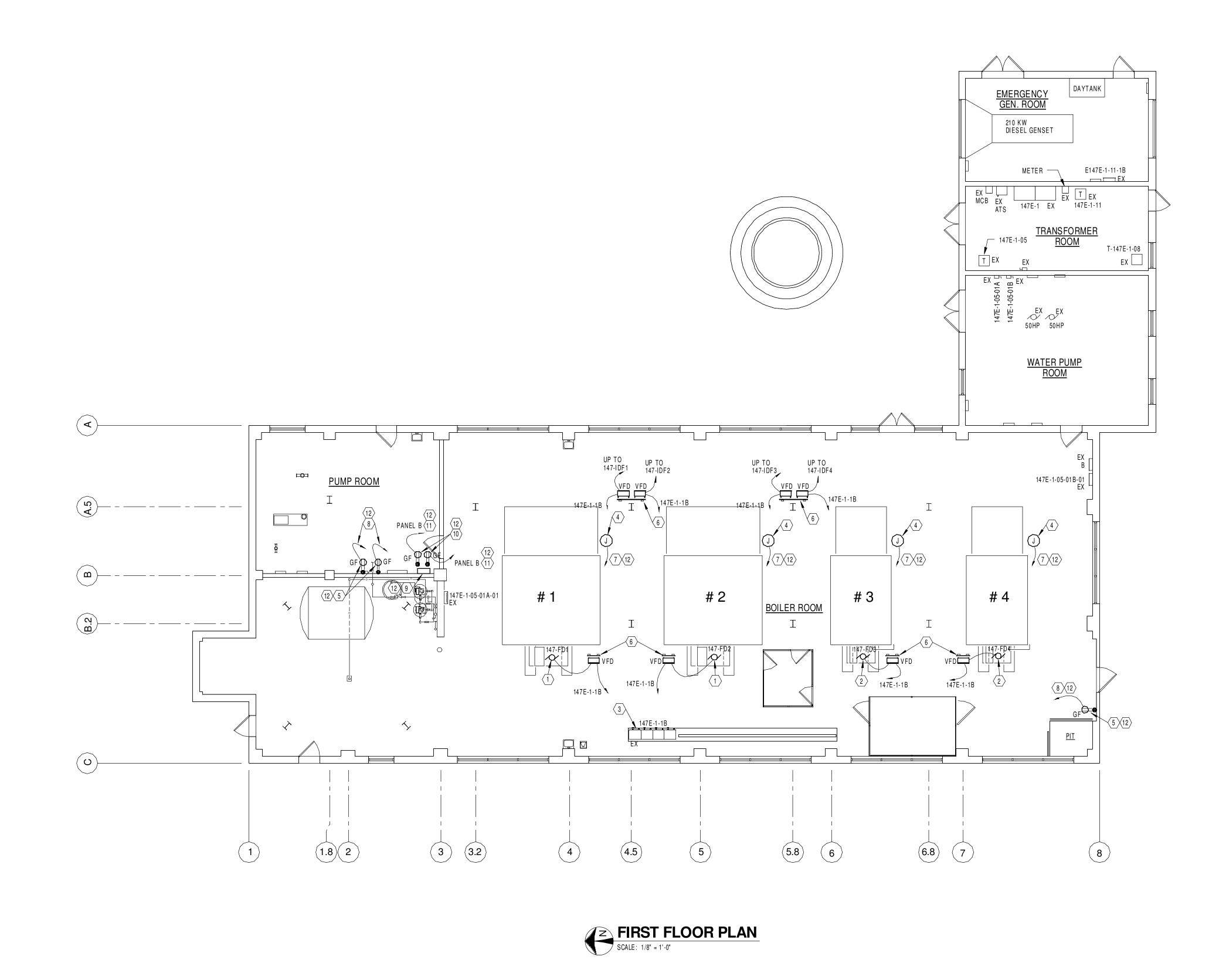
SCALE: 1/2" = 1'-0"



EX. MCC 147-E-1-1B <u>PHOTOGRAPH</u>

# 100% SUBMITTAL





#### **GENERAL NOTES**

- A. MAINTAIN ALL LIGHTING AND RECEPTACLE CIRCUITS FOR NEW WORK (WHERE INDICATED OR
- B. REMOVE ALL ACCESSIBLE ABANDONED WIRING OF ALL TYPES, OR CAP AND LABEL IN JUNCTION BOX FOR RE-USE, IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE.
- C. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.
   D. REFER TO ARCHITECTURAL PHASING PLAN AND INCLUDE ALL WORK NECESSARY TO ACCOMMODATE PHASING.
- E. REMOVE ALL LIGHTING FIXTURES WIRING DEVICES, DATA OUTLETS, FIRE ALARM, CONDUIT,
- WIRE, ETC. AS REQUIRED TO ACCOMMODATE NEW WORK. NOT ALL ITEMS NECESSARILY SHOWN.
- F. (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT SHALL HAVE A SEPARATE NEUTRAL AND COMMON/SHARED GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- G. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

#### **○ PLAN NOTES**

- 1. DISCONNECT EXISTING 40HP, 480V-3PH BOILER BURNER MOTOR AND REMOVE CIRCUITRY
  (3-#6, #10 GRD IN CONDUIT) BACK TO MOTOR CONTROL CENTER 147E-1-1B. RUN NEW
- CIRCUITRY PER SCHEDULE ON SHEET E501. CONNECT NEW VFD CONTROLLED MOTOR TO NEW CONTROLLER.

  2. DISCONNECT EXISTING 20HB 480V 20H BOILER BUILDIED MOTOR AND DEMOVE CIRCUITRY
- 2. DISCONNECT EXISTING 20HP, 480V-3PH BOILER BURNER MOTOR AND REMOVE CIRCUITRY (3-#8, #10 GRD. IN CONDUIT) BACK TO MOTOR CONTROL CENTER 147E-1-1B. RUN NEW CIRCUITRY PER SCHEDULE ON SHEET 147-E501. CONNECT NEW VFD CONTROLLED MOTOR TO NEW CONTROLLER.
- 3. REFER TO DETAIL ON SHEET E501 FOR WORK REQUIRED.
  4. EXISTING ELECTRICALLY OPERATED 120V BOILER BLOW-DOWN VALVE.
- 5. PROVIDE 120V-20A SIMPLEX RECEPTACLE FOR CHEMICAL FEED PUMP. LABEL RECEPTACLE AS DEDICATED.
- PROVIDE UNISTRUT FRAME SECURED TO FLOOR FOR NEW FAN CONTROLLER. COORDINATE EXACT LOCATION WITH COR.
   RUN 3-#12, #12 GRD. IN 0.75"C. FROM BLOW-DOWN VALVE TO CHEMICAL SYSTEM CO
- 7. RUN 3-#12, #12 GRD. IN 0.75°C. FROM BLOW-DOWN VALVE TO CHEMICAL SYSTEM CONTROL PANEL. COORDINATE EXACT REQUIREMENTS WITH DIV. 23.
- 8. RUN 2-#12, #12 GRD. IN 0.75"C. TO CHEMICAL SYSTEM CONTROL PANEL. COORDINATE EXACT REQUIREMENTS WITH DIV. 23.
- NEW CHEMICAL SYSTEM CONTROL PANELS.
   PROVIDE 120V-20A SIMPLEX RECEPTACLE FOR CHEMICAL SYSTEM CONTROL PANEL.
- LABEL "DEDICATED CHEMICAL SYSTEM".

  PROVIDE NEW 120V-20A/1P CIRCUIT REFAKER IN EXISTING CUTLER HAMMER PRI PANE
- 11. PROVIDE NEW 120V-20A/1P CIRCUIT BREAKER IN EXISTING CUTLER HAMMER PRL PANEL.
  12. UNDER BASE BID, PROVIDE ALL WORK ASSOCIATED WITH CHEMICAL FEED SYSTEM.
  UNDER DEDUCT ALTERNATE 1, DELETE THIS WORK.

# 100% SUBMITTAL



○ PLAN NOTES DISCONNECT EXISTING 25HP, 480V-3PH INDUCED DRAFT FAN MOTOR AND REMOVE CIRCUITRY BACK TO MOTOR CONTROL CENTER 147E-1-1B. NEW MOTOR (VFD CONTROL) WILL BE PROVIDED IN SAME PLACE. RUN NEW CIRCUITRY TO VFD BELOW AND THEN TO EXISTING SOURCE. REMOVE EXISTING MOTOR STARTER FROM MOTOR CONTROL CENTER. 2. DISCONNECT EXISTING 15HP, 480V-3PH INDUCED DRAFT FAN MOTOR AND REMOVE CIRCUITRY BACK TO MOTOR CONTROL CENTER 147E-1-1B. NEW MOTOR (VFD CONTROL) WILL BE PROVIDED IN SAME PLACE. RUN NEW CIRCUITRY TO VFD BELOW AND THEN TO EXISTING SOURCE. REMOVE EXISTING MOTOR STARTER FROM MOTOR CONTROL CENTER. 3. REMOVE EXISTING 480V-60A DISCONNECT SWITCH AND REPLACE WITH NEW 480V-60A/3P DISCONNECT SWITCH WITH "SWITCH OPEN" AUXILIARY CONTACTS. WIRE TO VFD BELOW TO SHUTDOWN UPON OPENING OF DISCONNECT SWITCH. CHIMNEY PLATFORM~

SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

### 100% SUBMITTAL



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